

METHOD OF OPERATION
LINE CIRCUIT

Test To Incoming Test Selector - Local Test Desk - Small Capacity - Power Driven Machine Switching System.

GENERAL DESCRIPTION

1. This circuit is used for completing connections between the incoming test selector and the local test desk. It is used with a sender circuit at the test desk whose sleeves are connected to battery through a maximum resistance of 128 ohms. The test line is arranged for supervision whenever the test man has occasion to withdraw the plug of the cord from the jack.

2. When the plug of the test cord is inserted in the jack of the test line, a red lamp lights as a busy signal, and the test selector starts to select the line to be tested. If the plug of the test cord is withdrawn from the jack during the progress of the call, the incoming selector will be returned to normal. If a subscriber calls, the white lamp flashes thus indicating an incoming call to the operator. To disconnect the test man operates the disconnect key which causes the selector to return to normal.

DETAILED DESCRIPTION

3. When the plug of the test cord is inserted in the test jack of the test line, the SLV relay operates from battery in the sender circuit over the sleeve and break contact of the D relay to ground through the windings of the SLV relay. The operation of the SLV relay lights the red busy lamp from battery on its make contact. When the sequence switch in the incoming selector circuit advances position 1 3/4, the INC. relay operates from battery through 840 ohms in the incoming test circuit over the sleeve, break contact of the D relay, to ground through the windings in series. The operation of the INC. relay shunts the 1,000 ohm winding of the SLV relay, thus reducing the resistance over the sleeve of the cord sufficiently, operate a relay in the test cord.

4. Should the call be abandoned by withdrawing the plug of the cord from the jack while selection is in progress, the SLV relay releases, shunting the 2,000 ohm winding of the INC. relay, thus reducing the resistance sufficiently to allow a relay in the incoming circuit to operate and restore the incoming test circuit to normal. If the plug of the test cord is withdrawn from the jack after the incoming selector has reached the test position, the SLV relay releases and closes a circuit operating the CI relay from ground on the make contact of the INC. relay, break contact of the SLV relay, to battery through the winding of the CI relay. The operation of the CI relay connects the L relay to the ring and ground to the tip of the line so that if a subscriber is trying to originate a call, the L relay will operate and connect interrupted battery to the white lamp, causing it to flash. The L relay operated also closes a circuit to operate the auxiliary signal alarm.

5. When the disconnect key is operated before the plug of the test cord is removed from the jack, the D relay operates and (a) opens the circuit over lead S of the incoming circuit thus releasing the INC relay, (b) opens the circuit to the sleeve of the test cord and (c) closes a circuit holding the SLV relay operated. The INC relay released removes the short circuit from the outer winding of the SLV relay.

6. When the disconnect key is released, the D relay releases, in turn releasing the SLV relay. The SLV relay released, extinguishes the Busy lamp.

7. When the disconnect key is operated after the plug of the test cord is removed from the test jack, the D relay operates and functions as described in paragraph 5 with the exception that the SLV relay operates instead of being held operated. When the disconnect key is released, the circuit functions as described in paragraph 6.

CIRCUIT REQUIREMENTS

THE READJUST REQUIREMENTS SHOWN BELOW ARE FOR MAINTENANCE USE ONLY.

	<u>OPERATE</u>	<u>NON-OPERATE</u>	<u>RELEASE</u>
B98 (L)	Readj. .004 amp. Test .008 amp. W.C.C. .012 amp.		Readj. .0025 amp. Test .0012 amp.
E31 (CI)	Readj. .012 amp. Test .026 amp. W.C.C. .040 amp.		Readj. .0024 amp. Test .0012 amp.
E303 (D)	Special requirements to insure slow release.		
	Readj. .027 amp.	Readj. .018 amp.	
	Test .029 amp.	Test .017 amp.	
	W.C.C. .040 amp.		
E1123 (INC) Wdgs. in series.	Special requirements to insure hold through inner winding.		
	Test .011 amp.		
	W.C.C. .014 amp.		
Inner wdg. (200 ohms).	Readj. .041 amp. Test .043 amp. Hold: W.C.C. .043 amp.		Readj. .007 amp. Test .0035 amp.
E1125 (SLV) Inner wdg. (40 ohms)	Test requirement of inner winding is proportional to test requirement of windings in series.		
	Test .060 amp.		
	W.C.C. .123 amp.		
Wdgs. in series	Readj. .015 amp. Test .016 amp. W.C.C. .017 amp.	Readj. .009 amp. Test .008 amp.	

ENG.--JLS:ML.
 11/16/21

CHK'D.--WCD:CWP.

APPROVED - C.L.SLUYTER, G.M.L.